

Montana Board of Oil and Gas Conservation Environmental Assessment

Operator: Slawson Exploration Company, Inc.

Well Name/Number: Puma (Federal) 1-17H

Location: NW NE Section 17 T30N R59E

County: Roosevelt, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 25-35 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick rig 900 HP to drill a single lateral horizontal Bakken Formation test, 14,668' MD/10,318' TVD.

Possible H₂S gas production: Possible

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 14,668' MD/10,318' TVD.

Water Quality

(possible concerns)

Salt/oil based mud: Yes to intermediate string hole to be drilled with oil based invert drilling fluids. Horizontal lateral will use oil based invert drilling fluids. Surface casing hole will use freshwater, and freshwater mud system to be used.

High water table: No high water table anticipated.

Surface drainage leads to live water: Yes, an unnamed ephemeral drainage to the east, about 3/8 of a mile from this location.

Water well contamination: None, closest water wells are about 3/8 of a mile to the northeast and about 1/2 of a mile to the south southwest of this location. Depth of this water wells are 174' and 300'. This permitted well will drill surface hole with freshwater to 1850'. Will run 1850' of steel surface casing and cement it to surface.

Porous/permeable soils: No, sandy clay soils.

Class I stream drainage: No, Class I stream drainages.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: _____

Comments: 1850' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None anticipated.

High erosion potential: No, location needs a moderate cut, up to 15.7' and a moderate fill, up to 17.8', required.

Loss of soil productivity: None, location to be restored after drilling well, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, large well site 450'X400'

Damage to improvements: Slight, surface use is grassland.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☒ Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction

Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road, Lamar Road. Will construct about 2768' of new access road into this location off the existing county road. Oil based invert drilling fluids will be recycled. Completion fluids will be trucked to a Class II disposal. Cuttings and mud solids will be disposed of in the lined reserve pit. Reserve pit will be allowed to dry and then backfilled with subsoil clays. If a closed loop mud system used will construct a smaller lined pit solely for cuttings only. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is about 1 mile to the northwest from this location.

Possibility of H2S: Possible

Size of rig/length of drilling time: Triple drilling rig 25 to 35 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Interior Lease Tern, Whooping Crane and Piping Plover.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: _____

Comments: Private surface lands. No concerns.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified

Mitigation

☐ avoidance (topographic tolerance, location exception)

☐ other agency review (SHPO, DSL, federal agencies)

☐ Other: _____

Comments: Private surface lands. No concerns.

Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: No concerns.

Remarks or Special Concerns for this site

Single lateral horizontal Bakken Formation test, 14,668' MD/10,318' TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur. Appears this well is a development well among existing producing wells.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Steven Sasaki

(title:) Chief Field Inspector

Date: June 18, 2010

Other Persons Contacted:

Bureau of Mines and Geology, GWIC website

(Name and Agency)

Water wells in Roosevelt County, Montana

(subject discussed)

June 18, 2010

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Roosevelt County

(subject discussed)

June 18, 2010

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____